

**HARDWARE-ASSISTED METHOD FOR THREAD SCHEDULING
USING DATA CACHE LOCALITY**

ABSTRACT OF THE DISCLOSURE

A method is provided for scheduling threads in a
5 multi-processor system. In a first structure thread ids are
stored for threads associated with a context switch. Each thread
id identifies one thread. In a second structure entries are
stored for groups of contiguous cache lines. Each entry is
arranged such that a thread id in the first structure is capable
10 of being associated with at least one contiguous cache line in at
least one group, the thread identified by the thread id having
accessed the at least one contiguous cache line. Patterns are
mined for in the entries to locate multiples of a same thread id
that repeat for at least two groups. Threads identified by the
15 located multiples of the same thread id are mapped to at least
one native thread, and are scheduled on the same processor with
other threads associated with the at least two groups.